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BODDIE, WILLIAM	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/646,869	LEE, KANG-HEUY	
	Examiner	Art Unit	
	William L. Boddie	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-6,8-17 and 19-27 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-6,8-17 and 19-27 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 6/29/07.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. In an amendment dated, June 29th, 2007, the Applicant amended claims 1-2, 1-14, 20-21 and added new claims 22-27. Currently claims 1-6, 8-17, and 19-27 are pending.

Response to Arguments

2. Applicant's arguments with respect to claim 1, 13, 14 and 20 have been considered but are moot in view of the new ground(s) of rejection.

3. Applicant's arguments filed January 16th, 2007 have been fully considered but they are not persuasive.

4. Specifically on page 9 of the Remarks, the Applicants argue that neither Ohyama nor Chang disclose the claim 21 limitation requiring a memory unit store code information corresponding to a remote control signal from the remote control and additional function information of the image processing apparatus determined based on a frequency of use of the image processing apparatus.

5. The Examiner must strenuously disagree. Ohyama very clearly discloses a key detection register for "receiving and holding a signal corresponding to a key code supplied from the body key apparatus." (col. 5, line 66 – col. 6, line 1). Additionally, Chang also very clearly discloses that additional function information is determined based on a frequency of use of the image processing apparatus in paragraph 50.

6. As such the claim 21 rejection is seen as proper and is thus maintained. Please note the updated rejections below to the pending claims that have been amended by the recent amendment.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 13 recites the limitation "the memory unit" in line 17. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-6, 8-17, 19-21 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohyama et al. (US 5,751,373) in view of Chang et al. (US 2003/0090515).

With respect to claim 1, Ohyama discloses, an apparatus for controlling functions of an image processing apparatus using a remote control (20-23 and 2 in fig. 1), the apparatus comprising:

a remote control signal receiver (13 in fig. 1) receiving a remote control signal output from the remote control (col. 5, lines 66-67);

a memory unit storing code information corresponding to the remote control signal and additional function information of the image processing apparatus (12 and 16-19 in fig. 1, col. 5, lines 61-65);

a controller controlling the additional function information stored in the memory unit to be displayed (11 in fig. 1, col. 5, lines 61-65) and controlling an additional function that is selected based on the displayed additional function information to be performed (col. 12, lines 61-67), if the remote control signal received via the remote control signal receiver is a signal for requesting the additional function information (23 in fig. 1; also see S1 and S2 in fig. 2A), and controls a function corresponding to a major function information to be performed if the remote control signal is the major function information (col. 14, lines 43-49; discuss performing examples of major functions such as increasing/decreasing the volume/channel); and

a display unit (4 in fig. 1) displaying the additional function information controlled by the controller (clear from fig. 7, for example).

Ohyama does not expressly disclose that the additional function information stored in the memory unit is categorized as such based on the frequency of use of the information, or that the additional function information stored in the memory unit is updated whenever the functions of the image processing apparatus are updated or a new function is added to the image processing apparatus.

Chang discloses, an apparatus (fig. 1) controlling functions of an image processing apparatus using a remote control (36 in fig. 1), the apparatus comprising:

a memory unit (176 in fig. 2) storing information corresponding to additional function information (middle of para. 26) of the image processing apparatus determined based on a frequency of use of the image processing apparatus (paras. 44, 47, 50; also note figs. 3-4);

the additional function information stored in the memory is updated whenever the functions of the image processing apparatus are updated or a new function is added to the image processing apparatus (beginning of the right hand column of page 5; also note para. 51).

In short, Chang adapts the user interface based on how frequently certain features are used. If a feature is rarely used by the user, that feature is removed from the memory which stores the features in the interface.

Ohyama and Chang are analogous art because they are both from the same field of endeavor namely, remote controls with access to on screen display controls.

At the time of the invention it would have been obvious to continually update the user interface of Ohyama based on each functions frequency of use, as taught by Chang.

The motivation for doing so would have been to make operation of the device more user friendly, by lessening the number of functions thereby lessening confusion and intimidation of the user (Chang; para. 5).

With respect to claim 2, Ohyama and Chang disclose, the apparatus of claim 1 (see above)

Ohyama further discloses, comprising an on-screen-display (OSD) processor (5 in fig. 1), controlled by the controller (fig. 1, col. 5, lines 61-67), generating OSD data corresponding to the additional function information and outputting the OSD data to the display unit (OSD RGB signal in fig. 1, col. 8, lines 39-42),

wherein the remote control signal is one of a selection signal (C1-C2 in fig. 20; col. 15, lines 14-16) or position information (A-H in fig. 20; col. 15, lines 3-8), and

wherein if the remote control signal is position information, the position information is input using directional keys (A-H in fig. 20) located around a selection button (vertical movement; col. 14, lines 50-57) and discloses a position of additional function information to be selected (col. 16, lines 5-9).

With respect to claim 3, Ohyama and Chang disclose, the apparatus of claim 2 (see above).

Ohyama further discloses, wherein the OSD data (OSD RGB signal in fig. 1, col. 8, lines 39-42) is processed by an existing OSD processing circuit (5 in fig. 1) in the image processing apparatus.

With respect to claim 4, Ohyama and Chang disclose, the apparatus of claim 1 (see above).

Ohyama further discloses, wherein in response to the controller receiving a selection signal corresponding to desired additional function information (note step S9 in fig. 2C), the controller marks the desired additional function information selected among the displayed additional function information (note color changes and location of cursor that mark the additional information selected from fig. 7 to fig. 8).

With respect to claim 5, Ohyama and Chang disclose, the apparatus of claim 4 (see above).

Ohyama further discloses, wherein the controller marks the desired additional function information selected by making the desired information darker or lighter than unselected additional function information (see figs. 6c and 7 for example).

With respect to claim 6, Ohyama and Chang disclose, the apparatus of claim 4 (see above).

Ohyama further discloses, wherein the controller marks the desired additional function information selected by making the desired information a different color than unselected additional function information (see figs. 6c and 7 for example, a different shade, lighter or darker, is a different color).

With respect to claim 8, Ohyama and Chang disclose, the apparatus of claim 1 (see above).

Ohyama further discloses, wherein the apparatus comprises an infrared ray receiving circuit (col. 15, lines 30-33).

With respect to claim 9, Ohyama and Chang disclose, the apparatus of claim 8 (see above).

Ohyama further discloses, wherein the remote control comprises an infrared ray transmitting circuit (col. 15 lines 30-33, 101 and 207 in fig. 20).

With respect to claim 10, Ohyama and Chang disclose, the apparatus of claim 1 (see above).

Ohyama further discloses, wherein the additional function information (for example fig. 14, hue, color, brightness) is modified without modifying the remote control (the display characteristics are altered without altering the remote, fig. 14).

With respect to claim 11, Ohyama and Chang disclose, the apparatus of claim 1 (see above).

Ohyama further discloses, further comprising directional keys provided on the remote control (20, 21 in fig. 1), with which a user selects from the displayed additional function information (col. 7, lines 45-56).

With respect to claim 12, Ohyama and Chang disclose, the apparatus of claim 11 (see above).

Ohyama further discloses, further comprising a selection button (22 in fig. 1) provided along with the directional keys.

With respect to claim 13, Ohyama discloses, a method of controlling the functions of an image processing apparatus using a remote control, the method comprising:

parsing a received remote control signal received from the remote control (col. 15, lines 30-33) to determine whether the remote control signal is related to major function information or additional function information (S3 in fig. 2a);

displaying information for available additional functions on the image processing apparatus if the remote control signal contains a request for displaying information of additional functions (fig. 12 for example, also see S2 in fig. 2a);

performing a function (col.12, lines 61-67) of the image processing apparatus which corresponds to a selection signal in response to the selection signal being received from the remote control while the additional function information is displayed; and

and performing a function of the image processing apparatus which corresponds to the received remote control signal if the remote control signal is not requested for displaying the information of additional function (col. 14, lines 43-49; discuss performing examples of major functions such as increasing/decreasing the volume/channel).

Ohyama does not expressly disclose that the additional function information stored in the memory unit is categorized as such based on the frequency of use of the information, or that the additional function information stored in the memory unit is updated whenever the functions of the image processing apparatus are updated or a new function is added to the image processing apparatus.

Chang discloses, an apparatus (fig. 1) controlling functions of an image processing apparatus using a remote control (36 in fig. 1), the apparatus comprising:

a memory unit (176 in fig. 2) storing information corresponding to additional function information (middle of para. 26) of the image processing apparatus determined based on a frequency of use of the image processing apparatus (paras. 44, 47, 50; also note figs. 3-4);

the additional function information stored in the memory is updated whenever the functions of the image processing apparatus are updated or a new function is added to the image processing apparatus (beginning of the right hand column of page 5; also note para. 51).

In short, Chang adapts the user interface based on how frequently certain features are used. If a feature is rarely used by the user, that feature is removed from the memory which stores the features in the interface.

At the time of the invention it would have been obvious to continually update the user interface of Ohyama based on each functions frequency of use, as taught by Chang.

The motivation for doing so would have been to make operation of the device more user friendly, by lessening the number of functions thereby lessening confusion and intimidation of the user (Chang; para. 5).

With respect to claim 14, Ohyama and Chang disclose, the method of claim 13 (see above).

Ohyama further discloses, wherein the additional function information is displayed as OSD data (OSD RGB signal in fig. 1),

wherein the remote control signal is one of a selection signal (C1-C2 in fig. 20; col. 15, lines 14-16) or position information (A-H in fig. 20; col. 15, lines 3-8), and

wherein if the remote control signal is position information, the position information is input using directional keys (A-H in fig. 20) located around a selection button (vertical movement; col. 14, lines 50-57) and discloses a position of additional function information to be selected (col. 16, lines 5-9).

With respect to claim 15, Ohyama and Chang disclose, the method of claim 13 (see above).

Ohyama further discloses, wherein in response to receiving position information for selecting desired additional function information among the additional function information displayed (16 in fig. 1 for example), a position for the selected additional function information is marked on the displayed additional function information so that a

user can perceive the selected additional function information (note the highlighting that occurs when the cursor is placed in a different position from fig. 7 to fig. 8).

With respect to claim 16, Ohyama and Chang disclose, the method of claim 15 (see above).

Ohyama further discloses, wherein the selected additional function information is marked by making it darker or lighter than remaining displayed additional function information (see highlighting in figs. 7 and 8 for example).

With respect to claim 17, Ohyama and Chang disclose, the method of claim 15 (see above).

Ohyama further discloses, wherein the selected additional function information is marked by making it a different color than remaining displayed additional function information (see figs. 6c and 7 for example, a different shade, lighter or darker, is a different color).

With respect to claim 19, Ohyama and Chang disclose, the method of claim 13 (see above).

Ohyama further discloses, wherein the parsing of the received remote control signal comprises differentiating between major functions and the available additional functions (S1 in fig. 2A, also col. 6, lines 49-53).

With respect to claim 20, Ohyama discloses, an image processing system comprising:

a remote control (fig. 17); a remote control signal receiver receiving a remote control signal output from the remote control (13 in fig. 1);

a memory unit storing code information corresponding to the remote control signal and additional function information of the image processing system (12, 16-18 in fig. 1; col. 5, lines 61-65);

a controller controlling the additional function information stored in the memory unit to be displayed and controlling an additional function that is selected based on the displayed additional function information to be performed (11 in fig. 1, col. 12, lines 61-67), if the remote control signal received via the remote control signal receiver is a signal for requesting the additional function information (23 in fig. 1; also see S1 and S2 in fig. 2A), and controls a function corresponding to a major function information to be performed if the remote control signal is the major function information (col. 14, lines 43-49; discuss performing examples of major functions such as increasing/decreasing the volume/channel); and

a display unit displaying the additional function information controlled by the controller (4 in fig. 1, for example).

Ohyama does not expressly disclose that the additional function information stored in the memory unit is categorized as such based on the frequency of use of the information, or that the additional function information stored in the memory unit is updated whenever the functions of the image processing apparatus are updated or a new function is added to the image processing apparatus.

Chang discloses, an apparatus (fig. 1) controlling functions of an image processing apparatus using a remote control (36 in fig. 1), the apparatus comprising:

a memory unit (176 in fig. 2) storing information corresponding to additional function information (middle of para. 26) of the image processing apparatus determined based on a frequency of use of the image processing apparatus (paras. 44, 47, 50; also note figs. 3-4);

the additional function information stored in the memory is updated whenever the functions of the image processing apparatus are updated or a new function is added to the image processing apparatus (beginning of the right hand column of page 5; also note para. 51).

In short, Chang adapts the user interface based on how frequently certain features are used. If a feature is rarely used by the user, that feature is removed from the memory which stores the features in the interface.

At the time of the invention it would have been obvious to continually update the user interface of Ohyama based on each functions frequency of use, as taught by Chang.

The motivation for doing so would have been to make operation of the device more user friendly, by lessening the number of functions thereby lessening confusion and intimidation of the user (Chang; para. 5).

With respect to claim 21, Ohyama discloses, an apparatus controlling functions of an image processing apparatus using a remote control, the apparatus comprising:

a memory unit (12, 13 and 16-19 in fig. 1) storing code information corresponding to a remote control signal from the remote control and additional function information of the image processing apparatus (col. 5, lines 61-65)

a controller (11 in fig. 1),

differentiating between major functions and additional functions in response to receiving a signal from the remote control (S1 in fig. 2a, also see col. 6, lines 49-53), and

causing additional function information to be displayed (fig. 15 for example), and

causing an additional function that is selected based on the displayed additional function information to be performed (col.12, lines 61-67), if a remote control signal received via the remote control is a signal for requesting the additional function information, and controls a function corresponding to a major function information to be performed if the remote control signal is the major function information (col. 14, lines 43-49; discuss performing examples of major functions such as increasing/decreasing the volume/channel); and

a display unit (4 in fig. 1) displaying the additional function information controlled by the controller (col. 5, lines 61-67).

Ohyama does not expressly disclose that the additional function information stored in the memory unit is categorized as such based on the frequency of use of the information, or that the additional function information stored in the memory unit is updated whenever the functions of the image processing apparatus are updated or a new function is added to the image processing apparatus.

Chang discloses, an apparatus (fig. 1) controlling functions of an image processing apparatus using a remote control (36 in fig. 1), the apparatus comprising:

a memory unit (176 in fig. 2) storing information corresponding to additional function information (middle of para. 26) of the image processing apparatus determined based on a frequency of use of the image processing apparatus (paras. 44, 47, 50; also note figs. 3-4);

the additional function information stored in the memory is updated whenever the functions of the image processing apparatus are updated or a new function is added to the image processing apparatus (beginning of the right hand column of page 5; also note para. 51).

In short, Chang adapts the user interface based on how frequently certain features are used. If a feature is rarely used by the user, that feature is removed from the memory which stores the features in the interface.

At the time of the invention it would have been obvious to continually update the user interface of Ohyama based on each functions frequency of use, as taught by Chang.

The motivation for doing so would have been to make operation of the device more user friendly, by lessening the number of functions thereby lessening confusion and intimidation of the user (Chang; para. 5).

With respect to claims 26-27, Ohyama and Chang disclose, the image processing system and apparatus of claims 20 and 21 (see above).

Ohyama further discloses, wherein the additional function information is displayed as OSD data (OSD RGB signal in fig. 1),

wherein the remote control signal is one of a selection signal (C1-C2 in fig. 20; col. 15, lines 14-16) or position information (A-H in fig. 20; col. 15, lines 3-8), and

wherein if the remote control signal is position information, the position information is input using directional keys (A-H in fig. 20) located around a selection button (vertical movement; col. 14, lines 50-57) and discloses a position of additional function information to be selected (col. 16, lines 5-9).

11. Claims 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohyama et al. (US 5,751,373) in view of Chang et al. (US 2003/0090515) and further in view of Bradley et al. (Us 6,574,798).

With respect to claims 22-25, Ohyama and Chang disclose, the apparatus and method of claims 1, 13, 20 and 21 (see above).

Neither Ohyama nor Chang expressly disclose, wherein if a code corresponding to the remote control signal received by the remote control signal receiver is not stored in the memory unit, the controller ignores the remote control signal.

However, it should be noted that Ohyama and Chang also do not disclose that the controller takes ***any*** action when it receives a signal that is not stored in the memory.

Bradley discloses, an audio/visual remote control system (fig. 1) wherein if a code corresponding to a remote control signal (wavy line in fig. 4) received by a remote control signal receiver (34 in fig. 4) is not stored in a memory unit (44 in fig. 4), the controller ignores the remote control signal (col. 13, lines 59-65).

Bradley, Ohyama and Chang are analogous art because they are all from the same field of endeavor namely remote controls with access to on screen display controls.

At the time of the invention it would have been obvious to one of ordinary skill in the art to program the controller, of Ohyama and Chang, to ignore remote control signals that it does not recognize as taught by Bradley.

The motivation for doing so would have been to not compromise the operation of the system when irrelevant signals are received (Bradley; col. 13, lines 59-60).

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William L. Boddie whose telephone number is (571) 272-0666. The examiner can normally be reached on Monday through Friday, 7:30 - 4:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

wlb
7/19/07

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